

ABSTRACT

Methods for the synthesis of tricalcium phosphates are presented, as well as a series of specific reaction parameters that can be adjusted to tailor, in specific ways, properties in the tricalcium phosphate precursor precipitate. Particulate tricalcium phosphate compositions having an average crystal size of about 250 nm or less are provided. Compositions of the invention can be used as prosthetic implants and coatings for prosthetic implants.